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10/628,660	07/28/2003	Ramabadran S. Raghavan	LUCW:0003	4409

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EXAMINER

AJIBADE AKONAI, OLUMIDE

ART UNIT	PAPER NUMBER
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2686

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/628,660	Applicant(s) RAGHAVAN ET AL.	
	Examiner Olumide T. Ajibade-Akonai	Art Unit 2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1, 2, 3, 4, 5, 8, 9, 10, 11, 17, 18, 19, 20, and 21 are rejected under 35 U.S.C. 102(a) as being anticipated by **Chen et al (20030211859)**.

Regarding claim 1, Chen et al discloses a transceiver unit (base station 204, with transmit unit 268 and receive unit 254, see fig. 2, p. 2 [0025], p. 3, [0026]) for use with a wireless communication system (group communication system 100, see fig. 1, p. 2, [0017]), the transceiver unit comprising: a communication interface (base station controller, BSC 110, see fig. 1, p. 2, [0019]) to facilitate communication between the transceiver and an access network unit (group call server performs call initiations and interacts with the communication devices, see p. 2, [0019], p. 3, [0029]) over an undedicated public network (IP protocol network 108, see p. 2, [0019]).

Regarding claim 2, as applied to claim 1, Chen et al further discloses wherein the communication interface (base station controller, BSC 110, see fig. 1, p. 2, [0019]) comprises at least one protocol layer (BSC issues an internet group management protocol, IGMP to disconnect a multicast tree see p. 5-6, [0055]).

Regarding claim 3, as applied to claim 2, Chen et al further discloses wherein

Art Unit: 2686

the at least one protocol layer maintains an IP address of the access network (the BSC binds each communicating device with the multicast IP-multicast address of a particular group call server).

Regarding **claim 4**, as applied to claim 2, Chen et al further discloses wherein the at least one protocol layer (transmitter data processor 264, see p. 2, [0026]) converts information (voice and/or packet data, see p. 2, [0026]) received from the access network unit (data source 262, see p. 2, [0026]) over the public network to RF signals (transmitter unit 268 converts voice and/or packet data to analog signals, see p. 3, [0026]) to be communicated by the transceiver over an air interface (voice and/or data is exchanged between base station 204 and mobile station 206 over via an air interface, see p. 2, [0022]).

Regarding **claim 5**, as applied to claim 2, Chen et al further discloses wherein at least one protocol layer converts RF signals (communication devices have IP connectivity with GCS 102, reverse link signal sent from mobile station 206 to base station 204, and base station receive data processor 58 recovers the voice/packet data, and the BSC sends media 622 received from a callers communication device to group call server, see p. 2, [0019], [0023]-[0025], p. 5, [0048]) received by the transceiver (base station 204, see fig. 2, p. 2, [0025]) over an air interface (air interface 208, see fig. 2, p. 2, [0022]) to information suitable for transmission over the public network (IP network 108, see fig. 1, p. 2, [0019]) to the access network controller (group call server 102, see fig. 1, p. 2, [0019]).

Regarding **claim 8**, as applied to claim 2, Chen et al further discloses wherein the at least one protocol layer (user datagram protocol, UDP see p. 2, [0020]) encapsulates higher protocol layer information (real-time protocol, RTP, see p. 2, [0020]) to facilitate protocol requirements over the public network.

Regarding **claim 9**, as applied to claim 2, Chen et al further discloses wherein at least one protocol layer comprises at least one technology dependent protocol layer (BSC issues an internet group management protocol, IGMP to disconnect a multicast tree see p. 5-6, [0055]).

Regarding **claim 10** as applied to claim 1, Chen et al further discloses wherein the public network comprises the internet (IP network 108, see fig. 1, p. 1, [0019]).

Regarding **claim 11**, as applied to claim 1, Chen et al further discloses wherein the transceiver unit comprising at least one antenna (antenna 250, see fig. 2, p. 2, [0025]) to facilitate communications between the receiver unit (base station 204, see fig. 2, p. 2, [0024]) and at least one portable communications device (mobile station 206, see fig. 2, p. 2, [0023]) over an air interface (mobile station 206 communicating with base station 204 over an air interface, see p. 2, [0022]).

Regarding **claim 17**, Chen et al further teaches a tangible medium (general purpose processor, DSP, ASIC, FPGA or programmable logic device, see p. 6, [0059]) having a software program (logic block, modules, and algorithm steps described can be implemented as computer software) for use in a wireless communication system (group communication system 100, see p. 2, [0017]), the software program comprising: at least one routine for facilitating communication of information (call set-up process, see fig. 6,

Art Unit: 2686

p. 4, [0039]) over an undedicated public network (IP network 108, see fig. 1, p. 2, [0019]) between at least one transceiver unit (base station 204 with a transceiver and receiver unit, see fig. 2, p. 2, [0025]), which is adapted to communicate over an air interface with portable communications devices (voice and/or data is exchanged between base station 204 and mobile station 206 over via an air interface, see p. 2, [0022]), and an access network unit (group call server 102, see fig. 1, p. 2, [0017]), which is adapted to process information communicated with the at least one transceiver (mobile station 206 with transmit and receive unit, and call set-up process in which mobile station communication device sends a group call request 604 to group call server in order to set up a group call, see fig. 2 and fig. 6, p. 2, [0023], p. 4, [0039]).

Regarding **claim 18**, as applied to claim 17, Chen et al further discloses wherein the at least one routine facilitates communication information over the internet (communication devices 104 may have IP connectivity to group call server 102 through the IP network 108, see fig. 1, p. 2, [0019]).

Regarding **claim 19**, as applied to claim 17, Chen et al further discloses wherein the at least one routine comprises at least one protocol layer (session initiation protocol, SIP, see p. 2, [0020]) adapted to facilitate communication over the public network (communication devices 104 perform registration with group call server 108 using session initiation protocol, SIP, see p. 2, [0020]).

Regarding **claim 20**, Chen et al further discloses a method of producing an information packet in a wireless communication system, the method comprising the acts of: receiving information by a transceiver unit via an air interface (mobile station 206

Art Unit: 2686

communicating with base station 204 over an air interface, see p. 2, [0022]); and processing the information to form an information packet (base station demodulator 256 processes received signal and processor 258 decodes the symbols to recover the data and messages, see fig. 2, p. 2, [0025]) suitable for transmission to an access network via an undedicated public network (BSC sends media 622 that it has received from communication device to group call server, see fig. 6, p. 5, [0048]).

Regarding **claim 21**, as applied to claim 20, Chen et al further discloses wherein the public network comprises the internet (IP protocol network 108, see p. 2, [0019]).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chen et al (20030211859)** in view of **Semper et al (20050014509)**.

Regarding **claim 6**, as applied to claim 2, Chen et al discloses the claimed invention except wherein the at least one protocol layer provides security information to the network access unit to facilitate secure communication over the public network.

In the same field of endeavor, Semper et al discloses wherein the at least one protocol layer (QoS controller 112, see fig. 1, p. 2, [0030]) provides security information (AAA server sends authorization message to BSC 110, and mobile station

Art Unit: 2686

170 access content server 150 via PDN 140 once a packet data call is set up, see fig. 1 and 3, p. 3 [0030], [0042]-[0044]) to the network access unit to facilitate secure communication over the public network (PDN 140, see fig. 1, p. 2, [0030])

Regarding **claim 7**, as applied to claim 2, Chen et al discloses the claimed invention except wherein the at least one protocol layer negotiates quality of service for communications with the access network over the public network.

In the same field of endeavor Semper et al discloses wherein the at least one protocol layer (QoS controller 112 in BSC 110, see fig. 1, p. 2, [0030]) negotiates quality of service for communications (QoS controller receives the quality of service profile for the mobile phone and sends a control message to the mobile phone to enable it to communicate according to the quality-of-service parameters obtained by the QoS controller, see p. 1, [0009]) with the access network (content server 150, see fig. 1, p. 3, [0031]) over the public network (Packet data network 140, see fig. 1, p. 2, [0030]).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching of Semper et al into the system of Chen et al for the benefit of controlling the quality of service in a wireless network.

5. Claims 12, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chen et al (20030211859)** in view of **Eilers et al "Reradiation (Echo) Analysis of a Tapered Tower Section Supporting a Side-Mounted DTV Broadcast Antenna and Corresponding Azimuth Pattern"**.

Regarding **claim 12**, as applied to claim 11, Chen et al discloses the claimed invention except the transceiver unit comprising a structure on which the at least one antenna resides.

In the same field of endeavor, Eilers et al discloses the transceiver unit comprising a structure on which the at least one antenna resides (side-mounted antenna on a tower, see fig. 1, p. 249, paragraphs 2-3).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching of Eilers et al into the system of Chen for the benefit of determining the azimuth pattern.

Regarding **claim 13**, as applied to claim 12, the combination of Chen et al and Eilers et al disclose the claimed invention (see claim 12).

Chen et al fails to disclose wherein the structure comprises a tower.

Eilers et al discloses wherein the structure comprises a tower resides (side-mounted antenna on a tower, see fig. 1, p. 249, paragraphs 2-3).

It would therefore have been obvious to one of ordinary skill in the art to further modify the combination of Eilers et al and Chen by including wherein the structure comprises a tower for the benefit of determining the azimuth pattern.

Regarding **claim 14**, as applied to claim 12, the combination of Chen et al and Eilers et al disclose the claimed invention (see claim 12).

Chen et al fails to disclose wherein the structure comprises a building.

Eilers et al discloses wherein the structure comprises a tower resides (side-mounted antenna on a tower, see fig. 1, p. 249, paragraphs 2-3).

Art Unit: 2686

It would therefore have been obvious to one of ordinary skill in the art to further modify the combination of Eilers et al and Chen by including wherein the structure comprises a building for the benefit of determining the azimuth pattern.

6. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Chen et al (20030211859)** in view of **Ketonen (6,104,917)**.

Regarding **claim 15**, as applied to claim 1, Chen et al discloses the claimed invention except wherein the transceiver comprising a structure for housing the communication interface.

In the same field of endeavor, Ketonen discloses wherein the transceiver comprising a structure for housing the communication interface (base station transceiver circuitry are housed within a cabinet, see col. 3, lines 13-15).

It would therefore have been obvious to one of ordinary skill in the art to combine the teaching of Ketonen into the system of Chen et al for the benefit of maintaining the temperature level of the radio circuitry.

Regarding **claim 16**, as applied to claim 15, Chen et al as modified by Ketonen disclose the claimed invention as applied (see claim 15).

Chen et al fails to disclose wherein the structure comprises a cabinet.

Ketonen discloses wherein the structure comprises a cabinet (base station transceiver circuitry are housed within a cabinet, see col. 3, lines 13-15).

It would therefore have been obvious to one of ordinary skill in the art to further modify the combination of Ketonen and Chen et al by including wherein the structure

Art Unit: 2686

comprises a cabinet for the benefit of maintaining the temperature level of the radio circuitry.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamamoto (20020038353) discloses a weather information delivery system and method thereof.

Bender et al (20020052204) discloses a method and apparatus for rapid assignment of a traffic channel in digital cellular communication systems.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olumide T. Ajibade-Akonai whose telephone number is 571-272-6496. The examiner can normally be reached on M-F, 8.30p-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on 571-272-7905. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2686

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

OA


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PATENT EXAMINER
5/2/05